COMMENTARY

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Approaches of open innovation to develop novel products and businesses for global market growth

Since its establishment in 1962, Hitachi Chemical has combined “material technology” and “processing technology” to create new state-of-the-art products. These technologies were cultivated through the development and manufacturing of original products such as insulating varnishes, industrial laminates, porcelain insulators and carbon brushes. Based on these technologies, Hitachi Chemical has made efforts to enhance its competitiveness as an enterprise focusing on research and development and to anticipate market needs.

Our common approach has been to conduct research and development within our own departments to realize ideas for products. However, as a result of factors such as the diversification of customer needs, the shortening of product life cycles, and the change in the competitive structure due to market globalization, we have reached the limits of what can be achieved through internal research and development. Although we have collaborated with the Hitachi Group, domestic and overseas universities, and research institutes for the purpose of enhancing basic and conventional technologies, we have decided to introduce a new strategy called “open innovation”. This strategy will allow us to create new businesses that use technology found outside of existing networks.

Open innovation, proposed in 2003 by Professor Henry Chesbrough of Harvard University, is an important concept wherein a company proactively cooperates with other companies to create innovative value and accelerate the creation of new businesses. In addition to incorporating innovative technology, open innovation involves securing the appropriate resources (management resources) at the appropriate times and from the required areas. These resources include distribution routes, manufacturing sites, and others necessary for commercialization. Although we are still in an early phase, I describe our efforts to implement open innovation in the next.

Open Laboratory

Regarding the development of semiconductor packaging materials, it is important to develop and provide packaging materials in a short period to accommodate reduced product cycles. For this reason, in June 2014, we established an open laboratory for the following purposes: to enhance the technology of semiconductor packaging materials; to shorten the development period; and to anticipate future needs. At this open laboratory, we engage in open innovation by collaborating with the manufacturers of semiconductor packaging materials as well as equipment manufacturers and the manufacturers of packaging materials.

Furthermore, we will establish the innovation center to connect the various our technologies with the future market. The center will serve as a place for collaborative creation where we discover future needs by working with customers, set manufacturers, equipment manufacturers, and the stakeholders involved in our businesses. We will prepare a comfortable space for promoting ideas, hold an interactive exhibition of our core technology, and establish a program where people from different fields to meet and discuss various topics. We look forward to creating novel products and businesses through these activities with customers.

External Agencies

We use external agencies, such as venture capital companies that invest in unlisted growth companies and agencies that match enterprises having needs and seeds. With these agencies, we work proactively to acquire technical licenses, conduct M&As and joint development projects, and engage in mutual sales. Through these activities, we are accelerating the speed of commercialization. In May of last year, we started investing in a venture capital company in the United States and assigned a full-time officer to start technical exploration. In cooperation with Hitachi Chemical America and departments in Japan, we are collecting the latest information on venture enterprises and research institutes, and sending the information to our research and development departments. Last year, we acquired about 2,000 items of information about venture enterprises and began exploring promising technology. We are developing functional films using nanotechnology introduced from the United States as high-performance materials for displays.

Along with promoting the activity of open innovation to establish it as a new culture, we will accelerate the creation of new businesses and products. Through these efforts, we aim to realize a better life and society by providing technology, products, and services that lead us into a new era.